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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,569	09/30/2003	William Daniel Bevers	Bevers 4-16-3-6-3/075903-	9976
29391	7590	07/25/2005	EXAMINER	
BEUSSE BROWNLEE WOLTER MORA & MAIRE, P. A. 390 NORTH ORANGE AVENUE SUITE 2500 ORLANDO, FL 32801			KRISHNAMURTHY, RAMESH	
			ART UNIT	PAPER NUMBER
			3753	

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/675,569

Applicant(s)

BEVERS ET AL.

Examiner

Ramesh Krishnamurthy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 - 19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

This office action is responsive to communications filed 11/15/2004.

**Claims 1 – 19 are pending.**

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 14 – 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 14 recites the limitation "said mass flow controller" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 recites the limitation "said means for measuring" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 recites the limitation "the line in "b" above" in line 9. There is insufficient antecedent basis for this limitation in the claim.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1 – 6 and 8 – 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (US 6,119,710) in view of Hinkle (US 5,684,245).

Brown discloses (Figs. 2 – 7) a system and method to measure a gas flow rate for a gas provided by a mass flow controller to a process chamber (215) via process line (404), comprising:

- a. said mass flow controller (422-424, 430);
- b. a vent line (such as (302) in Fig. 3) and
  - i. a bypass loop (Fig. 4) having an inlet junction near the first control valve (417) and a return junction with a second control valve (419) and comprising:
    - a. a flow detector (403, 470, 420);
    - b. a main vent line shut-off valve (such as (211) in Fig. 2)

whereby said gas flow directed through said bypass loop provides a measurement of said mass flow controller's gas flow rate which provides information for quantiation or for calibration of said mass flow controller.

The patent to Brown discloses the claimed invention with the exception of explicitly disclosing the bypass loop to be connected to either the process line or the vent line between the mass flow controller and the process chamber. Brown discloses the bypass loop to be located upstream of the mass flow controller (422-424, 430).

Hinkle discloses a flow arrangement for calibrating a mass flow controller wherein the bypass loop (see Fig. 4C) is disposed downstream of the mass flow controller (24) for the purpose of calibrating the mass flow coming out of the mass flow controller.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided in Brown the bypass loop downstream of the mass flow controller for the purpose of calibrating the mass flow coming out of the mass flow controller, as evident in Hinkle.

It is noted that the provision of a digital mass flow controller for a flow detector in the bypass loop is a design expedient over those features disclosed in the combination of Brown and Hinkle in that a digital mass flow controller is a known flow meter that is an art recognized equivalent to other accurate flow detectors.

It is noted that the combination of Brown and Hinkle disclosed above necessarily performs the method recited in claims 18 and 19.

6. Claims 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown and Hinkle as applied to claims 1 – 6, 8 – 19 above, and further in view of Nishikawa et al. (US 6,273,954).

The combination of Brown and Hinkle as set forth above discloses the claimed invention with the exception of explicitly disclosing a backpressure or back vacuum compensation to the flow detector.

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Nishikawa et al. discloses that is known in the art to provide a backpressure or back vacuum compensation to the flow detector for the purpose of obtaining accurate flow rate measurement.

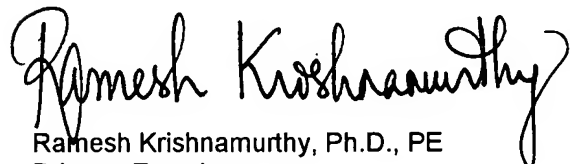
It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided in the combination of Brown and Hinkle a back pressure or back vacuum compensation to the flow detector for the purpose of obtaining accurate flow rate measurement, as recognized by Nishikawa et al..

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramesh Krishnamurthy whose telephone number is (571) 272 - 4914. The examiner can normally be reached on Monday - Friday from 10:00 AM to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene L. Mancene, can be reached on (571) 272 - 4930. The fax phone number for the organization where this application or proceeding is assigned is (571) 273 - 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ramesh Krishnamurthy, Ph.D., PE  
Primary Examiner  
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